Remarks:

Claims 7-16 are now pending in this application. Applicants have presented new claims 7-16 and canceled claims 1-6 to clarify the present invention. Applicants respectfully request favorable reconsideration of this application.

The present invention, as recited in newly presented independent claim 7, provides a method for simulating a missile with a simulator during testing of an aircraft weapon system. The method includes:

a) generating a target seeker command position;

b) generating a target seeker actual position;

c) generating a trouble signal by determining a difference between the target seeker command position and the target seeker actual position;

d) determining an error in amplitude and angle of a vector that specifies a direction to a target;

e) generating based upon the error in amplitude and angle of the vector an actual value signal adapted to the weapons system;

f) transmitting the actual value to the weapons system; and

g) repeating steps c-f.

The Examiner rejected claims 1-6 under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,414,347 to Monk et al. in view of U.S. patent 4,215,347 Jarrell et al.

Monk et al. does not suggest the present invention since, among other things, Monk et al. does not suggest a method for simulating an aircraft missile system during testing of the aircraft weapon system. The Examiner acknowledges that Monk et al. does not suggest utilizing guidance system communications in simulating a missile system, a target seeker, an actual value signal, a trouble signal, a continuous measurement of the error/trouble signal, sampled values in amplitude and phase that are used to determine the command signal, an interface that inverts the actual value signal, and an error/trouble signal generated in a summing unit by summing the signal from the weapon system with the inverted actual value signal. Additionally, Monk et al. does not suggest that simulated missile conditions would be allowed to affect input to a missile control. Furthermore, Monk et al. does not include any suggestion of a feedback control loop.

Combining the system suggested by Monk et al. with the system suggested by Jarrell et al. would not suggest the present invention since Jarrell et al. does not overcome the above-described deficiencies of the system suggested by Monk et al. For example, Jarrell et al. does not suggest that feed-back of an error/trouble signal from a target seeker to a weapon system would be suitable for simulating an aircraft missile during testing of the aircraft weapon system. Significantly, since Monk et al. does not include any suggestion of a feedback loop, there is no suggestion or motivation to modify Monk et al. with Jarrell et al. Such suggestion and motivation must exist to make the rejection proper. *See In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002); *In re Dembiczak*, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999); *In re Rouffet*, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998); *In re Dillon*, 16 U.S.P.Q.2d 1897 (Fed. Cir. 1990); and *In re Mills*, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). It would not be obvious to combine a first testing or simulation method with a second when such a combination would require such a whole scale

replacement of change in the first system.

The combination of Monk et al. and Jarrell et al. does not suggest the present invention since, among other things, the combination does not suggest a method for simulating an aircraft missile during testing of an aircraft weapon system. Additionally, neither references suggests a feedback loop where new error/trouble signals are generated and fed from a target seeker to a weapon system and that such a feedback loop would be suitable for simulating an aircraft missile during testing of an aircraft weapon system.

Not only is there no suggestion to include a feedback control loop in the system suggested by Monk et al., but there is no suggestion in Jarrell et al. that providing a feedback control loop including a trouble signal from a target seeker to a weapon system would be suitable for simulating an aircraft missile during testing of the aircraft weapon system. The present invention cannot be extrapolated in hindsight from the existence of feedback control loops in general and other systems for simulating missiles. Such would be an improper rejection. *See In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990); and *Ex parte Haymond*, 41 U.S.P.Q.2d 1217 (Bd. of Appeals 1996). Since Monk et al. does not overcome the deficiencies of Jarrell et al. and vice versa, the combination will suffer from the individual shortcomings of each reference.

In view of the above, the references relied upon in the office action, whether considered alone or in combination, do not disclose patentable features of the present invention. Therefore, the references relied upon in the office action, whether considered alone or in combination, do not make the present invention obvious. Accordingly, Applicants respectfully request

withdrawal of the rejection based upon the cited references.

In conclusion, Applicants respectfully request favorable reconsideration of this case and early issuance of the Notice of Allowance.

If an interview would facilitate the prosecution of this case, Applicants urge the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge insufficient fees and credit overpayment associated with this communication to Deposit Account No. 19-5127, 19390.0003.

Respectfully submitted,

Date: 3-17-03

Eric J. Franklin, Reg. No. 37,134
Attorney for Applicant
Swidler Berlin Shereff Friedman, LLP
3000 K Street, NW, Suite 300
Washington, DC 20007
Telephone: 202-424-7500